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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/032,394 | 12/19/2001 | Adityo Prakash | 10006.000610 | 5415 |

31894 7590 05/07/2007

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| EXAMINER | |
|---|---|
| ROSARIO, DENNIS | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2624 | |

| MAIL DATE | DELIVERY MODE |
|---|---|
| 05/07/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. 10/032,394 | Applicant(s) PRAKASH ET AL. | |
|---|---|---|---|
| | Examiner Dennis Rosario | Art Unit 2624 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

***Claim Rejections - 35 USC § 102***

**DETAILED ACTION**

***Response to Amendment***

1. The amendment was received on 3/26/07. Claims 1-42 are pending.

***Specification***

2. Due to the amendment, the objection to the specification is withdrawn.

***Claim Objections***

3. Due to the amendment, the objection to claims 1, 2, 4, 5, 9, 10, 18, 19, 21, 23, 25, 27, 28, 32, 33, 34, 37 are withdrawn.

***Response to Arguments***

4. Applicant's arguments filed 3/26/07 on page 15 with respect to claims 1-4 have been fully considered but they are not persuasive and states:

> " 'Performing the domain adaptive transform, **wherein the domain adaptive transform is a transform in which rules of representation are applied to process pixels near a boundary of the domain which differ from the rules of representation applied to process pixels in an interior of the domain'** (emphasis added) is not taught by the Yamaguchi reference."

The examiner respectfully disagrees for the reasons as discussed in the rejection

of claim 4, below. Not that the claimed rules of representation is interpreted as a first method that can process pixels near a boundary and a second method that is different from the first method to process pixels in an interior. Note that the claimed rules of representation as described in the specification more closely resemble an alpha map of Yamaguchi as shown in fig. 28 as an array of ones and zeros where a one represents an edge with an interior or foreground while a zero is not an edge or is a background.

5. Applicant's arguments on page 18,19 with respect to claim 5 have been fully considered but they are not persuasive and states:

> " 'Performing a pattern adaptive transform on the signal, **wherein the pattern adaptive transform is a transform that adapts to patterns present in the multidimensional signal**' (emphasis added) is not taught by the Yamaguchi reference."

The examiner respectfully disagrees since Yamaguchi teaches the above limitations as applied to a new interpretation of Yamaguchi in the rejection of claim 5, below.

### *Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamaguchi et al. (US Patent 5,978,514 A).

Regarding claim 4, Yamaguchi et al. discloses a method of processing all or a portion of a multi-dimensional signal with a domain composed of a collection of arbitrarily shaped domains via a multi-scale transform comprising the steps of:

a. Obtaining a multi-dimensional digital image frame (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS.)

b. Breaking the image frame into constituent arbitrary shaped domains, or given such a set (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS and contain an "optional shape" in col. 13, line 61. ), that cover all or a portion (The signal S1 has "micoblocks composed of 16 X 16 pixels (col. 14, lines 59-61)".) of the original multi-dimensional signal domain (Signal S1 of figure 1 has a domain of 16 X 16 pixels in col. 14, lines 59-61 that corresponds to the block.).

c. Performing the domain adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2,num. 17:DCT contained in fig. 1,num. 10:CODING MEANS), wherein the domain adaptive transform is a transform in which rules of representation (represented in fig. 1,num. 4) are applied to process pixels near a boundary (fig. 5(b), num 34) of the domain (fig. 5(b) has an unlabeled central rectangle) which differ (since fig. 1,num. 4 has at least three different ways of processing that correspond to three different types of regions in fig. 5(b)) from the rules of representation (represented in fig. 1,num. 4) applied to process pixels in an interior of the domain (said rectangle);

d. Quantizing (fig. 2, num. 21 : QUANTIZATION CIRCUIT) the resultant decomposition coefficients (FIG. 2, um. 17 outputs coefficients to fig. 2, num. 21:QUANTIZATION CIRCUIT.); and

e. Encoding (Fig, 2, num. 13:MODE DETERMINING MEANS provides for two types of encoding in col. 15, lines 1-5.) and transmitting the quantized values (Fig. 2, label:"S7" is an quantized output of fig. 2, num. 21:QIANTIZATION CIRCUIT.) over an information channel ("S7" of figure 2.) to a decoder (Fig. 48, num. 411:DECODING CIRCUIT) for reconstruction of an approximated signal (Fig. 48, num 70 is an output.).

Claims 1, 2, and 3 contain analogous subject matter and are rejected as applied in claim 4, above.

Regarding claim 5, Yamaguchi et al. discloses the method of processing a multi-dimensional signal via multi-scale transform comprising the steps of:

a. Obtaining the multi-dimensional signal (fig. 20,num. 30); and

b. Performing a pattern adaptive transform (fig. 20,num. 200) on the signal, wherein the pattern adaptive transform is a transform that adapts to patterns (fig. 20,num. 20 as shown in fig. 56 as an outline pattern of a traffic light and a car) in the multi-dimensional signal (represented in fig. 56 as the topmost image).

Regarding claim 6, Yamaguchi et al. discloses the method of claim 2 where step b comprises of a combined domain (Fig. 5(a) is the domain.) a pattern (Fig. 5(a),num. 31 shows an outer rectangle pattern.) adaptive transform (Fig. 5(a) is weighted in col. 16, lines 20-31 depending on the human visual characteristics which take patterns in account in col. 11, lines 8-14.).

Claims 7 and 8 were addressed in claim 6.

Regarding claim 9, Yamaguchi et al. discloses the method as in claim 3 where instead of transmitting over an information channel ("S7" of figure 2.) the encoded data (Fig. 2, label:"S7" and another output from quantizer 20 going into figure 2,num. 18 is an quantized output of fig. 2, num. 21:QIANTIZATION CIRCUIT.) is placed onto a storage apparatus (fig. 2,num. 14:REFERENCE MEMORY) or mechanism for the purpose of efficient storage and later decoding.

Regarding claim 10, Yamaguchi et al. discloses the method as in claim 3 where instead of directly quantizing (fig. 2, num. 21: QUANTIZATION CIRCUIT) the resultant decomposition coefficients (FIG. 2, um. 17 outputs coefficients to fig. 2, num. 21:QUANTIZATION CIRCUIT.) and then encoding (Figure 3, num. 25:ENCODER), the coefficients (FIG. 2, um. 17 outputs coefficients to fig. 2, num. 21:QUANTIZATION CIRCUIT.) are passed through a bit-plane encoder (No quantization is performed on the coefficients in the "dead zone" shown in figure 7(a) and 7(b), numeral 35 in col. 16, lines 34-38 and 55-59 of the quantization circuit 21. Thus the coefficients are passed to encoder 25 of figure 3 without quantization.).

Regarding claim 11, Yamaguchi et al. discloses the method as in any one of claims 1 or 5 where the multi-dimensional signal (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS.) is composed of multiple color ("Color Signal" in col. 1, line 47) or intensity components.

Regarding claim 12, Yamaguchi et al. discloses the method of claim 11 where the signal is 2-D (Signal S1 has an area.) and there are three color components (Color Signal and Luminance Signal in col. 1, line 47.) and these represent Y, U, and V and R,G,B.

Claim 13 was addressed in claim 12.

Regarding claim 14, Yamaguchi et al. discloses the method of claim 11 where the signal is 2-D (Signal S1 has an area.) and there are three color components (Color Signal and Luminance Signal in col. 1, line 47.) and these are any orthogonal color components (The signal S1 is orthogonally transformed in col. 4, lines 50-56.).

Regarding claim 15, Yamaguchi et al. discloses the method as [in any one of claim[s] 2 [or 6] where the multi-dimensional image frame (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS.) is a still image frame ("an image" in col. 1, line 16 is used to display the image in col. 1, lines 1-16.)

Regarding claim 16, Yamaguchi et al. discloses the method as in any one of claims 2 or 6 where the multi-dimensional image frame (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS.) is an intra-frame ("intraframe" in col. 15, line 4) for a sequence of video images.

Regarding claim 17, Yamaguchi et al. discloses the method as in any one of claims 2 or 6 where the multi-dimensional image frame (Fig. 1, label:"S1" is a multi-dimensional frame with dimensions of an area as shown in figure 1, num. 3:SCREEN-AREA DETERMINING MEANS.) is a residue frame ("S4" is a residue frame based on a subtraction of signals "S1" and "S3" of figure 2.) for a sequence of video images.

Regarding claim 18, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2,num. 17:DCT contained in fig. 1,num. 10:CODING MEANS) is applied during the calculation of coarser scale representations (Figure 59 shows the DCT transform, 2D DCT FOR BLOCKS (N XN) calculating a coarser or "REDUCED IMAGE" representation.) in a forward transform (Non-inverse transform) of a multi-scale transform (DCT transform).

Regarding claim 19, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS) is applied during an estimation of next finer scale representations (The output of figure 2,num. 18:INVERSE DCT) in [the] **an** inverse transform (Fig. 2,num. 18: INVERSE DCT) of a multi-scale transform during the reconstruction phase (Fig. 2,num. 18: INVERSE DCT is used "to reproduce any signals (col. 15, lines 28-31).") either in conjunction with the or irrespective of the use of the method in claim 18 (The inverse DCT 18 of figure 2 uses the results from DCT 17 of figure 2 as claim in claim 18.).

Regarding claim 20, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS) is applied in order to construct a sub-band decomposition (Figure 5(a) is a subband decomposition of an image into two regions 31 and 33 in col. 16, lines 39-42.) of a multi-scale transform (DCT transform).

Regarding claim 21, Yamaguchi et al. discloses the method as in any one of claims 18, 19, or 20 where instead of the domain (Fig. 5(a) is an image or domain where a transform takes place.) adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS), a pattern (Fig. 5(a), num. 31 shows an outer rectangle pattern.) adaptive transform (Fig. 5(a) is weighted in col. 16, lines 20-31 depending on the human visual characteristics which take patterns in account in col. 11, lines 8-14.) is used (The DCT transform performs a domain and pattern transform using the human visual characteristics.).

Claim 22 was addressed in claim 21.

Regarding claim 23, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain (Fig. 5(a) is an image or domain where a transform takes place.) adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS) is applied during the estimation of the next finer level of sub-bands (Fig. 49 shows a series of images with differing resolutions that can be selected.) in a multi-scale transform (Inverse DCT transform) during a reconstruction phase (Fig. 49, label "REPRODUCED SIGNAL" is a reconstructed signal based on the selected image.).

Claim 24 has been addressed in claim 10. The wording is different from both claims 10 and 24, but both are claiming the same function.

Regarding claim 25, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain (Fig. 5(a) is an image or domain where a transform takes place.) adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS) is applied such that points external (Fig. 5(a), num. 32 is a rectangular ring that is external to rectangular ring 31.) to the arbitrary domain (Fig. 5(a) shows a rectangular ring 31.) but within support of a filter (or filters) (Fig. 15, num. 40:SPATAIL-TEMPORAL FILTER has a support of 3 X 3 pixels as shown in figure 10(b).) are excluded (The rectangular ring 31 shown in figure 13(a) has a region excluded or "restrained" for detecting a region 47 as shown in figures 13(b) and 13(c) in col. 17, lines 32-34 and col. 18, lines 34-44.) from a mathematical result (The "restrained" portion of fig. 13(a), num. 31 is outputted to fig. 15, num. 25:ENCODER) of a convolution (Fig. 15, num. 25: ENCODER produces a convolution or mixture of signals that are combined as shown in figure 6.) or weighted average / difference.

Regarding claim 26, Yamaguchi et al. discloses the method as in any one of claims 1 or 6 where the domain (Fig. 5(a) is an image or domain where a transform takes place.) adaptive (Fig. 2,num. 17 DCT is adaptive because it adapts to changes of the input signal based on a selector 15 of figure 2.) transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS) is applied such that points (Figure 5(a) shows another rectangular ring 32.) external to the arbitrarily shaped domain (Fig. 5(a) shows a rectangular ring 31.) but within support of the filter (Fig. 10(b) is a filter with a support of 3 X 3.) are included in a mathematical result (Fig. 9, num. 44 is an adder.) of a convolution or weighted average / difference (A difference “1-k” of figure 9, num. 43 is inputted to adder 44.) but are further multiplied (or re-weighted) (Figure 5(a) shows another rectangular ring 32 that is weighted differently from rectangular ring 31 in col. 17, lines 26-29.) by another set of weighting factors (“m and k” in col. 17, lines 26,27).

Regarding claim 27, Yamaguchi et al. discloses the method of claim 26 where the set of additional multiplicative factors (“m and k” in col. 17, lines 26,27) is determined as a result (Fig. 8,num. 23: RESOLUTION DETECTING CIRCUIT outputs data.) of calculation of a local measure (Fig. 8, num. 23 measures resolution regions.) characterizing a transition (Fig. 8, num. 23 calculates resolution regions that have a transition between regions using respective weights in col. 16, lines 23-26.) at a boundary of the arbitrary domain (Fig. 5(a) shows a rectangular ring 31 that has a boundary with another rectangular ring 32.).

Regarding claim 28, Yamaguchi et al. discloses the method of claim 27 where the measure (Fig. 8, num. 23 measures resolution regions.) is based on a statistical function ("weight distribution function" in col. 16, lines 20,21.) of <u>a plurality of</u> pixel value differences (The weight distribution function is uses pixels of figure 4, num. 27 or figure 5(a), num. 31 that are weighted differently from another set of pixels of figure 4,num. 29 or fig. 5(a), num. 32 as mentioned in col. 16, lines 1-31.) across the boundary (Fig. 5(a) shows a rectangular ring 31 that has a boundary with another rectangular ring 32.) transition (Fig. 8, num. 23 calculates resolution regions that have a transition between regions using respective weights in col. 16, lines 23-26.).

Regarding claim 29, Yamaguchi et al. discloses the method of claim 28 where the statistical function ("weight distribution function" in col. 16, lines 20,21.) is the mean ("standard deviation" in col. 16, line 6 includes a mean value.).

Regarding claim 30, Yamaguchi et al. discloses the method of claim 28 where the statistical function ("weight distribution function" in col. 16, lines 20,21.) is the median ("normal distribution" in col. 16, line 7 includes a central value.).

Regarding claim 31, Yamaguchi et al. discloses the method of claim 28 where the statistical function ("weight distribution function" in col. 16, lines 20,21.) is based on a weighted average ("normal distribution" in col. 16, line 7 includes a central value.).

Regarding claim 32, Yamaguchi et al. discloses the method of claim 28 where the statistical function ("weight distribution function" in col. 16, lines 20,21.) is based on a weighted average (The weight distribution is based on a standard deviation that inherently contains an average.) with coefficients (or weights) that are nonlinear functions (The standard deviation inherently includes root and power functions.) of pixel values.

Regarding claim 33, Yamaguchi et al. discloses the method of claim 28 where the statistical function ("weight distribution function" in col. 16, lines 20,21.) is a pre-determined constant (The weight distribution constantly distributes weights in a specified area as mentioned in col. 16, lines 26-31.).

Regarding claim 34, Yamaguchi et al. discloses the method of claim 26 where the set of additional multiplicative factors ("m and k" in col. 17, lines 26,27) is determined as a result of calculation of a local measure (Fig. 13(b) shows a region 47 or 53 that is measured based on a number of pixels in col. 18, lines 34-46.) characterizing a transition (A region 32 contains a border 47 with region 53 of figure 13(c).) at the boundary of the arbitrarily shaped domain (Fig. 5(a) and figure 13(a) show a rectangular ring 31 next to the transition region 32.) and the calculation of the local measure (Fig. 13(b) shows a region 53 that is measured.) is dependent on data (Data from fig. 2,num. 22:INVERSE QUANTIZATION CIRCUIT is provided to INVERSE DCT 18 of figure 2) which is available to a decoder (Fig. 2,num. 18: INVERSE DCT) at the time of an operation when envisioned as part of an inverse transform (Fig. 2, num. 18: INVERSE DCT) or reconstruction phase of a multi-scale transform.

Regarding claim 35, Yamaguchi et al. discloses the method of claim 34 where the calculation of the local measure (Fig. 13(b) shows a region 47 or 53 that is measured based on a number of pixels in col. 18, lines 34-46.) is based on one or more coarser scales of representation (Fig. 49 shows a series of the signal S1 that has a progression of coarseness.) of the signal (A signal S1 of figure 1 has a domain of 16 X 16 pixels in col. 14, lines 59-61.) which have already been decoded (Fig. 2, num. 22: INVERSE QUANTIZATION CIRCUIT outputs a decoded signal to figure 18:INVERSE DCT.) and thus made known to the decoder (Fig. 2, num. 22: INVERSE QUANTIZATION CIRCUIT) by the time of the inverse transform step (Fig. 2,num. 18: INVERSE DCT.).

Regarding claim 36, Yamaguchi et al. discloses the method of claim 34 where the calculation of the local measure (Fig. 13(b) shows a region 47 or 53 that is measured based on a number of pixels in col. 18, lines 34-46.) is based on a motion compensated (Fig. 2, num. 11: MOTION-VECTOR DETECTION CIRCUIT) model frame (or equivalent)(Fig. 2,num. 14:REFERNCE FRAME MEMORY is inputted to figure 2, num. 11 that performs motion compensation.) that has already been decoded (via output arrow of fig. 2, num. 22:INVERSE QUANTIZATION) and thus made known to the decoder (Fig. 2,num. 22: INVERSE QUANTIZATION CIRCUIT) by the time of the inverse transform step (Fig. 2,num. 18: INVERSE DCT) in the context of a encoder-decoder system (Fig. 2, num. 10) related to the efficient transmission (Three outputs of figure 2,num. 10.) or storage of a sequence of video data.

Regarding claim 37, Yamaguchi et al. discloses the method as in any one of claims 25 or 26 where a function for renormalization, i.e. replacement of missing filter coefficients (Fig. 37, num. 500:AVERAGE VALUE SEPARATING CIRCUIT performs a function of assigning coefficient values of zero as shown in figure 38.), is accomplished by a statistical function (Fig. 37, num. 500 AVERAGE VALUE) of remaining pixel values (Fig. 38 shows remaining pixels values as white squares in the left array of pixels.) which are located at points contained within the arbitrary shaped domain (Fig. 5(a) and figure 13(a) show a rectangular ring 31 next to the transition region 32 that corresponds to an input signal of figure 37,num. 10:IMAGE SIGNAL. Thus, the array of pixels in figure 38 that correspond to the rectangular rings 31 and 32 are from the signal of figure 37, num .10:IMAGE SIGNAL.).

Claim 38 was addressed in claim 29.

Claim 39 was addressed in claim 30.

Claim 40 was addressed in claim 31.

Claim 41 was addressed in claim 32.

Regarding claim 42, Yamaguchi et al. discloses the method of claim 37 where some form of outlier rejection ("restrain" in col. 17, line 34) is used to ensure that outliers ("first region 31 of figure 5(a)" in col. 17, lines 27,28.) remaining inside the intersection of the domain (The image of fig. 5(a).) and the filter support (Fig. 10(b) shows a filter with a support of 3 X 3 that scans the region of the image in fig. 5(a).) do not disrupt the local accuracy or efficiency (Using figure 8, the "filter" 40 "restrains" any "codes" in col. 17, lines 32-35 produced for the DCT transform of fig. 2,num. 17 or encoder 25 of fig. 8.) of the transform (fig. 2, num. 17: DCT contained in fig. 1,num. 10: CODING MEANS).

### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kaup (US Patent 6,636,637 B1) is pertinent as teaching a method of coding with respect to an edge and interior portions as shown in fig. 4 using a rule as shown in fig. 1., num. 108.

Kim (US Patent 6,069,976) is pertinent as coding an object as shown in fig. 3 wherein the interior of the object is texture using a "predetermined rule" in col. 4, lines 14,15.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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